

Balancing equations, Reaction types/rates, endothermic and exothermic reactions REVIEW

Balance the follow and state the type of reaction:

- 1) $\text{Na}_3\text{PO}_4 + \text{KOH} \rightarrow \text{NaOH} + \text{K}_3\text{PO}_4$ Reaction Type _____
- 2) $\text{MgF}_2 + \text{Li}_2\text{CO}_3 \rightarrow \text{MgCO}_3 + \text{LiF}$ Reaction Type _____
- 3) $\text{P}_4 + \text{O}_2 \rightarrow \text{P}_2\text{O}_3$ Reaction Type _____
- 4) $\text{RbNO}_3 + \text{BeF}_2 \rightarrow \text{Be}(\text{NO}_3)_2 + \text{RbF}$ Reaction Type _____
- 5) $\text{AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + \text{Ag}$ Reaction Type _____
- 6) $\text{CF}_4 + \text{Br}_2 \rightarrow \text{CBr}_4 + \text{F}_2$ Reaction Type _____
- 7) $\text{HCN} + \text{CuSO}_4 \rightarrow \text{H}_2\text{SO}_4 + \text{Cu}(\text{CN})_2$ Reaction Type _____
- 8) $\text{GaF}_3 + \text{Cs} \rightarrow \text{CsF} + \text{Ga}$ Reaction Type _____
- 9) $\text{BaS} + \text{PtF}_2 \rightarrow \text{BaF}_2 + \text{PtS}$ Reaction Type _____
- 10) $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$ Reaction Type _____
- 11) $\text{NaF} + \text{Br}_2 \rightarrow \text{NaBr} + \text{F}_2$ Reaction Type _____
- 12) $\text{Pb}(\text{OH})_2 + \text{HCl} \rightarrow \text{H}_2\text{O} + \text{PbCl}_2$ Reaction Type _____
- 13) $\text{AlBr}_3 + \text{K}_2\text{SO}_4 \rightarrow \text{KBr} + \text{Al}_2(\text{SO}_4)_3$ Reaction Type _____
- 14) $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ Reaction Type _____
- 15) $\text{Na}_3\text{PO}_4 + \text{CaCl}_2 \rightarrow \text{NaCl} + \text{Ca}_3(\text{PO}_4)_2$ Reaction Type _____
- 16) $\text{K} + \text{Cl}_2 \rightarrow \text{KCl}$ Reaction Type _____
- 17) $\text{Al} + \text{HCl} \rightarrow \text{H}_2 + \text{AlCl}_3$ Reaction Type _____
- 18) $\text{N}_2 + \text{F}_2 \rightarrow \text{NF}_3$ Reaction Type _____
- 19) $\text{SO}_2 + \text{Li}_2\text{Se} \rightarrow \text{SSe}_2 + \text{Li}_2\text{O}$ Reaction Type _____
- 20) $\text{NH}_3 + \text{H}_2\text{SO}_4 \rightarrow (\text{NH}_4)_2\text{SO}_4$ Reaction Type _____

21) Name 4 things that affect the rate of reaction & give an example of where/how we saw this in class:

- 1.
- 2.
- 3.
- 4.

22) What direction would heat be moving in the following types of reaction (into the reaction or into the surroundings)

Endothermic:

Exothermic:

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23) What is needed for a successful collision?

24) What does the law of conservation of energy state?

25) Energy a body has because it is in motion is defined as _____ energy

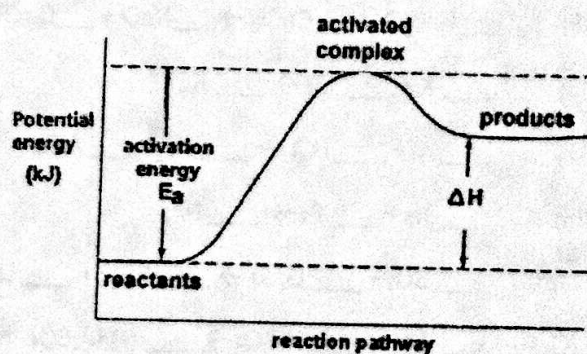
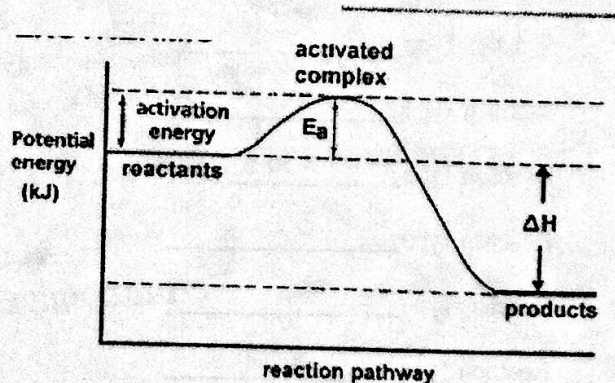
26) Energy is _____ when bonds break

27) Energy is _____ when bonds form

28) When the energy released from the formation of bonds is greater than the energy required to break bonds the reaction is considered:

29) When the energy released from the formation of bonds is less than the energy required to break bonds the reaction is considered:

30) What is activation energy and what can lower it??



31) Label the above diagrams as either endothermic or exothermic

32) Give an example of each type of reaction:

Endothermic

Exothermic